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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,616	07/24/2001	Vladimir Segal	30-5004 DIV3	6002

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EXAMINER	
COMBS, JANELL A	
ART UNIT	PAPER NUMBER
1742	19

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/912,616	SEGAL ET AL.	
	Examiner	Art Unit	
	Janelle Combs-Morillo	1742	

-- The MAILING DATE of this communication appears on the cover she t with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9,11,13, 15,17,16
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 37-59 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original specification does not mention the particular limitation of "non-iron based alloy", and therefore said phrase is considered new matter. The instant specification does provide support for a preferred composition embodiment, wherein the target comprises "at least one of Al, Ti, Cu, Ta, Ni, Mo, Au, Ag, Pt and alloys thereof" (specification page 2 lines 6-7). However, the specification does not specify (explicitly or implicitly) that said target is a "non-iron based alloy".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 37-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunlop (US 5,780,755).

Dunlop teaches an aluminum alloy with a grain size of < 20μm (column 4 line 19), in particular <2 μm (column 10 lines 12-13), wherein the precipitate regions present are <1 μm (column 4 lines 22-23). Dunlop teaches that randomly oriented grains (column 8 line 59) or other desired textures (including <111>, see Fig. 11) can be controlled by ECAE (column 8 lines 25-39). Dunlop teaches that said microstructure is uniform throughout (column 8 lines 5-6).

Concerning independent claim 37, Dunlop does not mention "the substantial absence of precipitates". However, because Dunlop teaches that precipitate regions present <1 μm (column 4 lines 22-23), then it is held that the presently claimed "substantial absence of precipitates" is met by the disclosure of Dunlop.

Concerning independent claim 38, because Dunlop teaches that said microstructure is uniform throughout (column 8 lines 5-6), then it is held that Dunlop teaches that the second-phase precipitates are likewise uniformly distributed. The degree of <111> texture taught by Dunlop in Fig. 11 (which was the result of ECAE, see column 8 lines 60-67) qualifies as "strong texture", substantially as presently claimed.

Concerning independent claim 39, Dunlop teaches a grain size of ≤ 2 μm (column 10 lines 12-13).

Concerning the process claims, Dunlop does teach performing working by ECAE in multiple passes (column 8 lines 1-4) such that a desired texture can be formed by varying parameters of ECAE (column 8 lines 25-59).

Because Dunlop teaches an aluminum alloy with the presently claimed grain size and texture characteristics, and wherein the Dunlop teaches substantially the same process steps as presently claimed, it is held that Dunlop has created a prima facie case of obviousness of the presently claimed invention.

Concerning claims 41, 51, and 56, as stated above, Dunlop teaches two ECAE passes at column 8 line 1. Additionally the examiner points out that it is well settled that a product-by-process claim defines a product, and that when the prior art discloses a product substantially the same as that being claimed, differing only in the manner by which it is made, the burden falls to applicant to show that any process steps associated therewith result in a product materially different from that disclosed in the prior art. See MPEP 2113, *In re Brown* (173 USPQ 685) and *In re Fessman* (180 USPQ 524) *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Applicant has not shown that the presently claimed "at least 3 passes" (claim 41) or "from 4 to 6 passes" (claim 56) results in a product materially different than the prior art product.

Concerning claims 42, 45, 53-55, Dunlop does not teach the orientation distribution function (ODF) of the instant aluminum alloy. However, the examiner asserts that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, if the

prior art teaches the identical chemical structure, the properties applicant discloses and/or claims (such as ODF) are necessarily present. See MPEP 2112.01.

Concerning claims 44, 52, and 57-59, as stated above, Dunlop teaches an aluminum alloy composition, which meets the presently claimed composition limitation.

Concerning claims 43 and 46, the grain size taught by Dunlop (as stated above) overlaps the presently claimed ranges.

Concerning claim 47, as stated above, Dunlop teaches that said microstructure is uniform throughout (column 8 lines 5-6).

Concerning claims 48-50, Dunlop teaches that precipitate regions present <1 μm (column 4 lines 22-23), which overlaps the presently claimed range.

Response to Arguments/Amendments

5. In the response filed on March 6, 2003, applicant amended claims 37, 38, and 39, and submitted various arguments traversing the rejections of record. In the response filed on June 16, 2003, applicant added claims 57-59, and elected the Al species in response to the restriction requirement.

As stated above, the amendment inserting the limitation that said product must be a non-iron based alloy is new matter.

Applicant's argument that the present invention is allowable over the prior art of record because Dunlop does not teach a texture selected from {111}, {140}, {120}, {130}, etc. has not been found persuasive. As stated above, Dunlop teaches a predominant {111} texture, which is created by the ECAE process, and not present in the as cast material.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs- Morillo whose telephone number is (703) 308-4757. The examiner can normally be reached Monday through Friday from 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (703) 308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

GEORGE WYSZOMIERSKI
PRIMARY EXAMINER

jcm

September 8, 2003